The DACS is the Department of Defense Software Information Clearinghouse. The DACS is sponsored by the Defense Technical Information Center (DTIC) through the Information Analysis Center (IAC) Program.

The DACS serves as a gateway to software technology information by providing access to WWW resources, publishing technical reports, hosting seminars, publishing the *Software Tech News* newsletter, presenting courses, and performing technical studies for patrons of the Center.

For Additional Information on the Databases and Empirical Data available from the DoD DACS contact:

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Providing the Right Information at the Right Time

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DACS ROI
Return-On-Investment
Products

Cost Benefit Tools, Products & Services from the DACS

www.dacs.dtic.mil

Unclassified and Unlimited Distribution

Measuring Return-on-Investment from Software Process Improvement

The DACS has shown that the sound application of software engineering and software process improvement methods by software managers:

- Reduces Development and Maintenance Costs.
- Improves Customer Satisfaction.
- Reduces Cycle Time.
- Increases Profitability.
- Improves Professional Staff Capabilities and Morale.

Software professionals know that software process improvement is beneficial. However, those same professionals have a difficult time convincing their management that SPI is worth management and company investment. That's where the DACS has done some work and study to aide professionals in being able to rationalize the investment. That work has resulted in some resources available to professionals from the DACS:

- ◆ **DACS ROI Data Base**
- ◆ **DACS ROI CD**
- ◆ **DACS ROI Course**
- ◆ **DACS ROI Report**

Return-On-Investment Database 1.0

The DACS ROI Database captures the benefits gained by software organizations that have undertaken improvements in software management via software process improvement. Results from in excess of 50 organizations are included in this database. Improvements in cost, schedule, reliability, employee morale, and customer acceptance resulting from these improvements have all been captured in this database.
A web based user interface is also provided to search the database to allow users to identify which types of goals (e.g., reduce cost, improve quality) they wish to understand, which types of improvements (e.g. inspections, cleanroom) are to be considered, and what period of time they wish considered for their query. The system will then collect all data that would be of interest and presents the data in an easy to understand format.

DACS ROI CD

The DACS ROI CD includes two of the products listed in this brochure; the ROI Database and the Measuring Return on Investment from Software Engineering and Management technical report.

DACS ROI Course – The Cost Benefits of Software Process Improvement

The DACS also offers a course to aide professionals in computing return on investment. This half day (4-Hour) course provides hands on experience in cost, schedule, and return-on-investment estimation; primarily concentrating on ROI estimation. This course is based on the DACS report "A Business Case for Software Process Improvement". In this course a general model is presented to estimate the cost benefits of various improvements; and several improvements such as Software Inspections, Reuse, CMM SPI, and Cleanroom are evaluated from an economic value point of view. A ROI spreadsheet model has been developed by the DACS, and several case studies utilizing this model will be examined in this course.

DACS ROI Report – "A Business Case for Software Process Improvement (REVISED and UPDATED): Measuring Return on Investment from Software Engineering and Management"

This report examines in detail the details necessary to demonstrate from a business, profit and loss, and senior management perspective the benefits of improved software management using software process improvement (SPI) techniques. The report generalizes and models the cost benefits one can achieve from SPI. The report examines the business implications of the primary benefits (i.e., cost improvements, schedule improvements, quality improvements) as well as secondary benefits (i.e., improved employee morale, higher customer satisfaction). A framework is established to compare current methods to proposed methods.